5

10

SYSTEM AND METHOD FOR DIAGNOSTIC MULTICAST SWITCHING

ABSTRACT OF THE INVENTION

An integrated circuit relay device and switching method are presented that permit communications to be routed in a variety of patterns so that diagnostic procedures can be performed in situ, to evaluate digital wrapper communication links. The relay has a pair of inputs, a pair of outputs, a decoder, and an encoder. The relay is programmable to operate in a variety of modes, so that communications can be passed between any set of ports, with or without encoding and decoding processes. The flexible relay routing permits either test signals or normal communications to conducted through the device.